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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/522,711

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Takashi Kenmochi

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06/08/2004

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EXAMINER

DANG, DUY M

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 06/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/522,711

Applicant(s)

KENMOCHI, TAKASHI

Examiner

Duy M Dang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,8,10 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,8, 13, 15, and 17-20 is/are rejected.
- 7) ☒ Claim(s) 3 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendment filed 3/15/04 has been entered and made of record.

2. Claim 1 is objected to because of the following informalities:

In claim 1, line 2, delete "decode" and insert "decoded". Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 8, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Augenbraun et al. (US Patent No. 5,654,759, art of record filed 11/20/03, paper #6).

Regarding claim 1, Augenbraun teaches an apparatus for detecting a block noise generated on an input video signal that has been coded and decoded per pixel block (see col. 1 lines 5-10), the apparatus comprising:

a differentiator to differentiate the input video signal per pixel block to obtain a differentiated signal (i.e., the use of the pixel differences to determine the cost function mentioned in col. 2 lines 39-41 and col. 8 lines 14-23. Note the equation shown in column 8 lines 14-23, the differences between the pixel blocks A and B, and A and C refer to these claimed features);

a detector to detect impulse of the differentiated signal to obtain a detection signal carrying the impulse (i.e., the blockiness identification circuit 202 employs a cost function to

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identify video data corresponding to blocky frames or images mentioned in col. 7 lines 65-67 and figure 2. Note the video data corresponding to blocky frames or images refers to the so called “signal carrying the impulse”. This interpretation appears to consistent with applicant’s disclosed figure 3C and page7 lines 19-20);

an integrator (note that the summation shown in the cost function in col. 8 lines 14-23 function as the so called “integrator”. Note that this cost function in the reference is used to obtain the integrated detection signal) to integrate the detection signal for every N-th pixel of consecutive M pixels in a horizontal direction and to obtain integrated detection signals corresponding to a first to an M-th pixels, respectively, M being the number of pixels per pixel block in the horizontal direction and N being an integer among 1 to M (These newly added features are satisfied by **the array of 8x8 pixels block** mentioned in col. 8 lines 13-23 and the $A(X,0)$ of the cost function mentioned in the same cited portion. For example, the $A(X,0)$ wherein $X=0$ to 7 (mentioned in the cost function) is the 8 pixels block in the horizontal direction. Thus the $A(X,0)$ corresponds to the so called “M pixels in the horizontal direction. Furthermore, the range of 0 to 7 (also mentioned in the cost function. Note that the “0” refers to first pixel in the 8x8 pixel block and likewise for the “7” which refers to the 8th pixel in the 8x8 pixels block) corresponds to the N-th pixel wherein N being an integer among 1 to M in the cost function); and

a determinator to compare the integrated detection signal and a reference signal to determined whether the block noise is generated on the input video signal (see col. 8 lines 24-28. Note the comparison between the evaluation of the cost function and the predetermined threshold).

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Regarding claim 8, it is noted that this claim 8 is a method claim reciting similar features called in the apparatus claim 1. Thus, claim 8 is also rejected for the same reasons as set forth in claim 1 above.

Regarding claims 17-20, Augenbraun further teaches integrating the detection signal over the entire of frame (see figure 3 and col. 8 lines 14-22).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Augenbraun et al. (US Patent No. 5,654,759, art of record filed 11/20/03, paper #6).

The advanced statements in paragraph 4 above with regard to Augenbraun as applied to claims 1 and 8 are incorporated hereinafter.

Applicant's failure to adequately traverse the Examiner's taking of Official Notice in the last office action is taken as an admission of the fact(s) noticed.

Regarding claim 13, it is noted that this claim recites a computer for implementing similar method steps as called for in method claim 8 above. Augenbraun fails to explicitly teach such computer. However, using a computer for carrying such a method is well known in the art (Official Notice). Using a computer would greatly enhance computation in both time and accuracy thereby improving image quality.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the conventional teaching such as a computer in combination with Augenbraun in order to take full advantage of the speed economy, efficiency and ready availability of known computer devices and microprocessors.

Regarding claim 15, it is noted that this claim recites a processor readable medium storing program code for causing a computer performing similar features called for in claim 1.

Augenbraun fails to explicitly teach such features. However, using such features is well known in the art (Official Notice) in order to greatly enhance computation in both time and accuracy thereby improving image quality and easy to modify.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the conventional teaching of a computer in combination with Augenbraun for the reasons stated above.

Allowable Subject Matter

7. Claims 3 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3 and 10 would be allowable because the cited prior art (Augenbraun) fails to teach or suggest the features of: a counter to count the number of integrated impulses of the integrated detection signal per predetermined unit of image carried by the input video signal; a plurality of delay section each delaying the counted number by a period decided based on the predetermined unit of image, thus outputting count signals for succeeding images in the predetermining unit of image, and a median section to select a middle count signal among the

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count signals, which is the middle in level, the middle count signal being compared with the reference signal.

Response to Arguments

8. Applicant's arguments filed 3/15/04 have been fully considered but they are not persuasive.

In reply to Applicant's remarks with regard to claims 1, 8, 13, and 15 (see pages 9-11) that of "input video signal is differentiated per pixel, not per pixel block, to obtain a differentiated signal", the examiner disagrees because of the reasons as follows: In Augenbraun, the cost function shown in column 8 lines 14-23 teaches these claimed limitation. For example, the difference between the "A(0,0)-B(7,0)" when Y=0 corresponds to the differentiated signal per pixel. Thus, Augenbraun does teach claimed invention.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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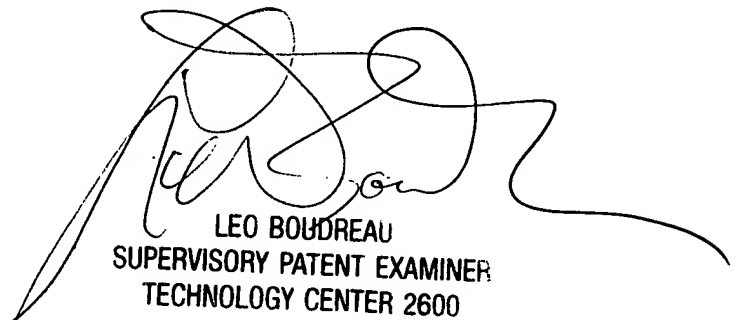
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy M Dang whose telephone number is 703-305-1464. The examiner can normally be reached on Monday to Thursday from 6:30AM to 5:00PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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5/27/04



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